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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,990	01/04/2002	Seung-Ki Joo	069457.0106	9637

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EXAMINER

LE, THAO X

ART UNIT	PAPER NUMBER
2814	

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/038,990	Applicant(s) JOO ET AL.	
	Examiner Thao X Le	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8 and 10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 2, 9 and 11-17 are canceled in the amendment dated 02 June 2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5897347 Yamazaki et al.

Regarding claims 1, 8 Yamazaki discloses a method of fabricating a semiconductor device including a crystallized active layer in fig. 1A-D comprising the steps of: providing a substrate 11, fig. 1A, column 7 line 7, depositing an amorphous silicon (a-Si) layer 13, column 7 line 8, on substrate 11, depositing a metal layer of Ni 14, column 7 line 12, for inducing low temperature crystallization of a-Si on at least a portion of a-Si layer by sputtering, column 7 line 12, while heating substrate 11 to a temperature, column 7 line 15, that a temperature that allows at least a portion of the deposited metal to react with the a-Si to form an oxidation-stable metal silicide film and conducting a thermal treatment of substrate, column 7 line 20, so that a-Si layer is crystallized by metal induced lateral crystallization (MILC) propagating from the portion covered by metal layer, column 2 lines 46-67.

With respect to 'the deposited metal to react with the a-Si to form an oxidation-stable metal silicide film and conducting a thermal treatment of substrate so that a-Si layer is crystallized by metal induced lateral crystallization (MILC) propagating from the portion covered by metal layer' limitation, Yamazaki discloses a substantially identical process as claim; thus it would have the same effects. When the claimed and the prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 195 USPQ 430, 433 (CCPA 1977). In addition, such process and its effects are being confirmed in US Pub 2001/0034088 to Nakamura et al., see Background Art.

Regarding claim 3, 5, Yamazaki discloses the method wherein the substrate is heated at temperature in a range of 200-700 °C, column 7 line 11, wherein the substrate is heated by using heat conduction.

Regarding claim 4, 6, Yamazaki discloses the method wherein metal layer 14 is deposited using sputtering, column 7 line 12, wherein the metal layer in contact with a-Si layer 13 forms a metal silicide, column 7 line 29.

Regarding to claims 7, Yamazaki discloses the method wherein other portion of metal layer 14 remain in the state of metal and further comprising a step of removing the remaining metal layer by etching, column 7 line 30-31.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5897347 to Yamazaki et al.

Regarding claim 10, Yamazaki discloses the method wherein forming an insulation layer 704, fig. 7A-C, column 11 line 43, on substrate 701 and a-Si 706, column 11 line 36, removing a portion of insulation layer 704, fig. 7A to expose a portion of a-Si and depositing metal, column 12 line 17, fig. 7C, on the exposed surface of a-Si. In addition in fig. 1A-D, Yamazaki discloses the metal layer is sputtering on the a-Si surface while heating the substrate as discussed in claim 1. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to combine the teaching of Yamazaki in fig. 7A-C and Fig. 1A-D, because it would have

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provided a favorable nickel film having good adhesion strength as taught by Yamazaki, column 7 line 14-17.

Response to Arguments

7. Applicant's argument with respect to claims 1, 3-10 has been considered but is moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

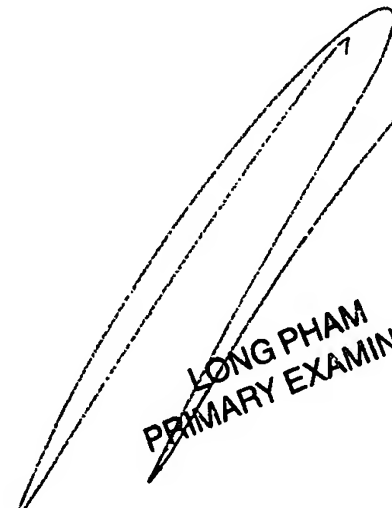
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thao X. Le
23 June 2004



LONG PHAM
PRIMARY EXAMINER